

WHAT IS CLAIMED IS:

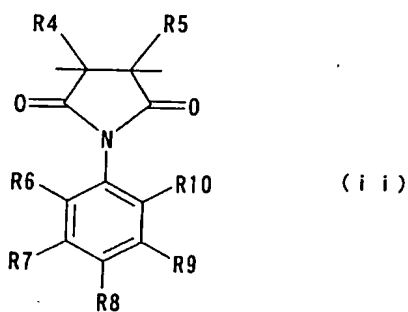
1. A resin composition for optical film exhibiting negative birefringence, which comprises:

(a) 30-95% by weight of a copolymer comprising an α -olefin residual group unit represented by the following formula (i):



wherein R1, R2 and R3 each independently represent hydrogen or an alkyl group having 1-6 carbon atoms, and

an N-phenyl-substituted maleimide residual group unit represented by the following formula (ii):



wherein R4 and R5 each independently represent hydrogen, or a linear or branched alkyl group having 1-8 carbon atoms; and R6, R7, R8, R9 and R10 each independently represent hydrogen, a halogen atom, a carboxylic acid, a carboxylic acid ester, a hydroxyl group, a cyano group, a nitro group, or a linear or branched alkyl group having 1-8 carbon atoms, and

having a weight average molecular weight, as reduced into standard polystyrene, of $5 \times$

10^3 to 5×10^6 ; and

(b) 70-5% by weight of at least one acrylonitrile-styrene based copolymer selected from an acrylonitrile-styrene copolymer and an acrylonitrile-butadiene-styrene copolymer, a weight ratio of an acrylonitrile residual group unit to a styrene residual group unit being 20/80 to 35/65, and having a weight average molecular weight, as reduced into standard polystyrene, of 5×10^3 to 5×10^6 .

2. The resin composition for optical film as claimed in claim 1, wherein the copolymer (a) is at least one selected from the group consisting of an N-phenylmaleimide-isobutene copolymer and an N-(2-methylphenyl)maleimide-isobutene copolymer.

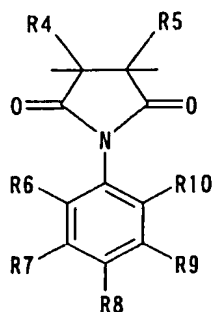
3. An optical film exhibiting negative birefringence, which comprises:

(a) 30-95% by weight of a copolymer comprising an α -olefin residual group unit represented by the following formula (i):



wherein R1, R2 and R3 each independently represent hydrogen or an alkyl group having 1-6 carbon atoms, and

an N-phenyl-substituted maleimide residual group unit represented by the following formula (ii):



(ii)

wherein R4 and R5 each independently represent hydrogen, or a linear or branched alkyl group having 1-8 carbon atoms; and R6, R7, R8, R9 and R10 each independently represent hydrogen, a halogen atom, a carboxylic acid, a carboxylic acid ester, a hydroxyl group, a cyano group, a nitro group, or a linear or branched alkyl group having 1-8 carbon atoms, and

having a weight average molecular weight, as reduced into standard polystyrene, of 5×10^3 to 5×10^6 ; and

(b) 70-5% by weight of at least one acrylonitrile-styrene based copolymer selected from an acrylonitrile-styrene copolymer and an acrylonitrile-butadiene-styrene copolymer, a weight ratio of an acrylonitrile residual group unit to a styrene residual group unit being 20/80 to 35/65, and having a weight average molecular weight, as reduced into standard polystyrene, of 5×10^3 to 5×10^6 .

4. The optical film as claimed in claim 3, wherein the copolymer (a) is at least one selected from the group consisting of an N-phenylmaleimide-isobutene copolymer and an N-(2-methylphenyl)maleimide-isobutene copolymer.

5. The optical film as claimed in claim 3 or 4, wherein when a stretching direction within a film plane is defined as an x-axis, a direction within a film plane and

perpendicular to the x-axis is defined as a y-axis, a direction outside the film plane and perpendicular to the stretching direction is defined as a z-axis, a refractive index in the x-axis direction is defined as n_x , a refractive index in the y-axis direction is defined as n_y , and a refractive index in the z-axis direction is defined as n_z , the relationship among three-dimensional refractive indexes is $(n_z \geq n_y > n_x)$ or $(n_y \geq n_z > n_x)$.

6. The optical film as claimed in claim 3 or 4, wherein when a stretching direction is defined as an x-axis and a y-axis within a film plane, a direction outside the film plane and perpendicular to the x-axis and y-axis is defined as a z-axis, a refractive index in the x-axis direction is defined as n_x , a refractive index in the y-axis direction is defined as n_y , and a refractive index in the z-axis direction is defined as n_z , the relationship among three-dimensional refractive indexes is $(n_z > n_y \geq n_x)$ or $(n_z > n_x \geq n_y)$.

7. A process of producing an optical film exhibiting negative birefringence, which comprises:

forming a resin composition for optical film exhibiting negative birefringence, which comprises:

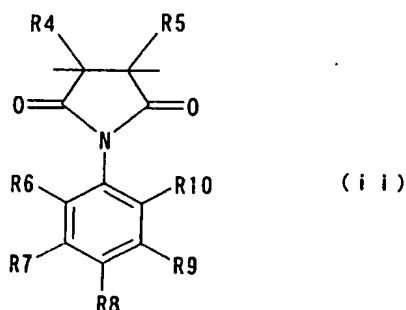
(a) 30-95% by weight of a copolymer comprising an α -olefin residual group unit represented by the following formula (i):



wherein R1, R2 and R3 each independently represent hydrogen or an alkyl group having from 1 to 6 carbon atoms, and

an N-phenyl-substituted maleimide residual group unit represented by the following

formula (ii):



wherein R4 and R5 each independently represent hydrogen or a linear or branched alkyl group having 1-8 carbon atoms; and R6, R7, R8, R9 and R10 each independently represent hydrogen, a halogen atom, a carboxylic acid, a carboxylic acid ester, a hydroxyl group, a cyano group, a nitro group, or a linear or branched alkyl group having 1-8 carbon atoms, and

having a weight average molecular weight, as reduced into standard polystyrene, of 5×10^3 to 5×10^6 ; and

(b) 70-5% by weight of at least one acrylonitrile-styrene based copolymer selected from an acrylonitrile-styrene copolymer and an acrylonitrile-butadiene-styrene copolymer, a weight ratio of an acrylonitrile residual group unit to a styrene residual group unit being 20/80 to 35/65, and having a weight average molecular weight, as reduced into standard polystyrene, of 5×10^3 to 5×10^6 into a film; and

stretching and orienting the film at a temperature in the range of from [(glass transition temperature of the resin composition) – 20°C] to [(glass transition temperature of the resin composition) + 20°C].

8. The process as claimed in claim 7, wherein the stretching and orientation are

uniaxial stretching and orientation.

9. The process as claimed in claim 7, wherein the stretching and orientation are biaxial stretching and orientation.

10. A retardation film comprising an optical film as claimed in claim 3.